

CLAIMS

What is claimed is:

1. A system for tilting polarization and steering main beam of airship antenna using GPS, wherein , comprising:

a 1st GPS receiver, which is located in the airship;

a 2nd GPS receiver, which is located in the ground station;

an airship antenna database for extracting the radiation pattern information of airship antenna and polarization information according to the posture of the antenna based on the position information of the airship;

a ground station antenna database for extracting the radiation pattern information of ground station antenna and polarization information according to the posture of the antenna based on the position information of the ground station;

a polarization and main beam direction correction operating device for computing the correction value of polarization and main beam direction of the airship antenna and the ground station antenna based on the position information of the airship and the ground station received from the 1st GPS receiver and the 2nd GPS receiver; and

an airship antenna controller for correcting the posture of the airship antenna by controlling tilting the polarization and steering the main beam direction of the airship antenna based on the corrected value received from the polarization and main beam direction correction operating device.

2. The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1, further comprising:

a ground station antenna correcting device for correcting the posture of the ground station antenna by controlling tilting the polarization and steering the main beam direction of the ground station antenna based on the corrected value received from the polarization and main beam direction correction operating device.

3. The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1 or 2, wherein, the airship antenna controller comprising:

an airship antenna polarization tilting controlling unit for generating polarization tilting control signal of the airship antenna based on polarization correction value received from the correction value output device;

an airship antenna main beam steering controlling unit for generating main beam steering control signal of the airship antenna based on main beam direction correction value

received from the correction value output device; and

an airship antenna driving unit for driving the airship antenna to correct the posture of the airship based on the control signals received from the airship antenna polarization tilting controlling unit and the airship antenna main beam steering controlling unit.

4. The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1 or 2, wherein, the polarization and main beam direction correction operating device comprising:

an azimuth and elevation operating unit for computing the azimuth and elevation between the airship and the ground station based on the position information of the airship and the ground station received from the 1st GPS receiver and the 2nd GPS receiver;

a polarization correction operating unit for computing polarization correction value between the airship and the ground station based on the azimuth and elevation information received from azimuth and elevation operating unit and information received from the airship antenna database and the ground station antenna database;

a main beam direction correction operating unit for computing main beam correction value between the airship and the ground station based on the azimuth and elevation information received from azimuth and elevation operating unit and information received from the airship antenna database and the ground station antenna database.

5. The system for tilting polarization and steering main beam of airship antenna using GPS in claim 2, the ground station controller comprising:

a ground station antenna polarization tilting controlling unit for generating polarization tilting control signal of the ground station antenna based on polarization correction value received from the correction value output device;

a ground station antenna main beam steering controlling unit for generating main beam steering control signal of the ground station antenna based on main beam direction correction value received from the correction value output device; and

a ground station antenna driving unit for driving the airship antenna to correct posture of the airship based on the control signals received from the ground station antenna polarization tilting controlling unit and the ground station antenna main beam steering controlling unit.

6. The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1 or 2, wherein, the airship antenna database comprising:

an airship antenna polarization information extracting unit for extracting the information of polarization according to the posture of the airship antenna based on position

information of the airship received from the 1st GPS receiver; and

an airship antenna main beam direction information extracting unit for extracting information of radiation pattern of the airship antenna based on the position information of the airship received from the 1st GPS receiver.

7. The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1 or 2, wherein the airship antenna database comprising:

a ground station antenna polarization information extracting unit for extracting the information of polarization according to posture of the ground station antenna 160 based on position information of the ground station received from the 2nd GPS receiver; and

a ground station antenna main beam direction information extracting unit for extracting the information of radiation pattern of the ground station antenna based on position information of the ground station received from the 2nd GPS receiver.